

ABSTRACT

A transparent electrically conductive film comprising one of $\text{In}_2\text{O}_3\text{-ZnO}$, $\text{In}_2\text{O}_3\text{-SnO}_2$, ZnO and SnO_2 is provided on a surface of a metal electrode of an organic EL device on the light-emitting layer side, and the thickness of this transparent electrically conductive film is set such as to satisfy the following equation, where L is the optical distance from the organic light-emitting layer to the metal electrode, and λ is the emission wavelength, whereby light reflected by the metal electrode is made to undergo interference and thus strengthen itself in the device; as a result, there are provided an organic EL device and an organic EL panel using the same, according to which the external quantum efficiency can be improved with no accompanying deterioration in the brightness, and moreover the contrast can be improved.

$$L = \frac{2n+1}{4} \lambda \quad (n = 0, 1, 2, \dots)$$